

JAN 29 2007

DOCKET NO. I20 06799 US
SERIAL NO. 10/772,971
PATENT**REMARKS**

Claims 1-29 were pending in this application.

Claims 1-29 have been rejected.

Claims 1, 3-8, 11, 12, 14-17, 19, 20, 22-24, and 27 have been amended as shown above.

Claims 1-29 remain pending in this application.

Reconsideration and full allowance of Claims 1-29 are respectfully requested.

I. STATUS OF CLAIMS

The Office Action states in the "Response to Arguments" section that the § 101 rejection of Claims 1-29 has been maintained. (*Office Action, Page 8, Section 7*). This appears to be incorrect. The Office Action rejects the various claims under 35 U.S.C. § 102 and § 103. The Office Action never rejects the claims under § 101. However, because the Office Action states that the § 101 rejection has been maintained, the Applicant responds to the Office Action's "Response to Arguments" section in Section II below.

The Applicant respectfully requests clarification in the next Official communication as to whether Claims 1-29 stand rejected under 35 U.S.C. § 101.

II. REJECTION UNDER 35 U.S.C. § 101

The Office Action rejects Claims 1-29 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. In particular, the Office Action states that Claims 1-11 "produce no tangible result" and that only "identification and selection of parameters occur without any

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output of the parameters in a tangible form i.e. display, output file.” However, Claim 1 clearly recites “outputting the one or more model parameters for use in processing one or more signals.” Moreover, there is no requirement that the results obtained by a claimed invention be output in “tangible form.” MPEP § 2106 simply requires that the results of a claimed invention be “tangible.”

To be “tangible,” a claimed invention needs to set forth a “practical application of [a] judicial exception to produce a real-world result.” (*MPEP § 2106*). One or more model parameters used to process a signal are a “real-world result.” It is irrelevant whether a model parameter is “displayed” or stored in an “output file.” There is no requirement in MPEP § 2106 that a result be physically tangible. In fact, this contradicts the express statement in MPEP § 2106 that the tangible requirement “does not necessarily mean that a claim must either be tied to a particular machine or apparatus.”

The Office Action also asserts that Claims 1-29 do not allow the usefulness of the invention to be realized since the “identification and selection of parameters can be reasonably interpreted as occurring with a processor without any method to access the parameters.” The Applicant respectfully requests that the Patent Office provide any support for its assertion that a claim must specifically recite a technique for accessing a model parameter in order for the identification of the model parameter to be statutory. There is nothing in MPEP § 2106 supporting this assertion. Moreover, this assertion appears to ignore the fact that the claims expressly recite outputting the one or more model parameters. This appears to be a new requirement for patentability that is not supported by any statute, rule, case law, or MPEP

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section.

The Office Action further notes that while the parameters are stored and used to "de-noise" a signal in Claim 29, the de-noised signal is non-statutory and not tangible. It appears that the Patent Office is taking the position that no digital filter or any digital device that uses data to filter or process a signal is patentable (since they all involve using data to filter or process a signal). The Applicant respectfully requests that the Patent Office provide any recent Board decision, court decision, statute change, or rule change rendering all digital filtering or processing of data unpatentable.

The Patent Office appears to be taking the position that a claimed invention must produce a result that is physically tangible. This is improper and is not supported by MPEP § 2106 or any statute, rule, case law, or other MPEP section. As a result, any attempt to impose this requirement on the Applicant is arbitrary and capricious.

Accordingly, the Applicant respectfully requests withdrawal of the § 101 rejection.

III. REJECTION UNDER 35 U.S.C. § 102

The Office Action rejects Claims 1, 2, 12, 13, 20, and 21 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2004/0057585 to Madievski et al. ("*Madievski*"). This rejection is respectfully traversed.

A prior art reference anticipates a claimed invention under 35 U.S.C. § 102 only if every element of the claimed invention is identically shown in that single reference, arranged as they are in the claims. (*MPEP* § 2131; *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567

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(*Fed. Cir. 1990*)). Anticipation is only shown where each and every limitation of the claimed invention is found in a single prior art reference. (*MPEP § 2131*; *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (*Fed. Cir. 1985*)).

Madievski recites a method and device for separating mixed signals using data provided by multiple sensors. (*Abstract*). The method may include dynamically configuring communications between a processor and the sensors based on the number of sensors, determining “un-mixing parameters” based on the number of sensors, and separating at least some of the signals using the un-mixing parameters. (*Pars. [0008]-[0012]*). One technique for determining the un-mixing parameters could involve determining an “un-mixing matrix W ” based on the eigenvalues of (XX^T, R) , where X represents a matrix containing sensor samples and R represents a matrix based on assumptions imposed on the signal sources. (*Pars. [0016]-[0017] and [0043]*). The “assumptions imposed on the signal sources” could be based on whether the signal sources represent non-white, non-stationary, or non-Gaussian signal sources. (*Par. [0046]*). One technique for separating at least some of the signals using the un-mixing parameters could involve multiplying the matrix X by a transpose of the matrix W (i.e. computing $W^T X$). (*Par. [0019]*).

Claims 1, 12, and 20 have been amended to recite identifying “one or more parameters of a model” using “at least a portion of [a] projection,” where the projection includes “an upper triangular matrix having two diagonals.” Claims 1, 12, and 20 have also been amended to recite that identifying the one or more model parameters includes “using one or more defined areas in the upper triangular matrix,” where the one or more defined areas are “located in a single section

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of the upper triangular matrix defined by the two diagonals.”

Madievski simply recites a process for determining how to separate multiple signals contained in a mixture of those signals using an “un-mixing matrix W.” *Madievski* lacks any mention of using “one or more defined areas” located in “a single section of [an] upper triangular matrix” that is “defined by [its] two diagonals” to determine one or more model parameters, which are output for use in processing one or more signals. As a result, *Madievski* fails to anticipate all elements recited in Claims 1, 12, and 20.

For these reasons, *Madievski* fails to anticipate the Applicant’s invention as recited in Claims 1, 12, and 20 (and their dependent claims). Accordingly, the Applicant respectfully requests withdrawal of the § 102 rejection and full allowance of Claims 1, 2, 12, 13, 20, and 21.

IV. REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 3, 4, 14, 15, and 22 under 35 U.S.C. § 103(a) as being unpatentable over *Madievski* in view of U.S. Patent Publication No. 2005/0015205 to Repucci et al. (“*Repucci*”). This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (*MPEP* § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (*MPEP* § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)). Only when a *prima*

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facie case of obviousness is established does the burden shift to the Applicant to produce evidence of nonobviousness. (*MPEP* § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993)). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the Applicant is entitled to grant of a patent. (*In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985)).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on the Applicant's disclosure. (*MPEP* § 2142).

Claims 3, 4, 14, 15, and 22 depend from Claims 1, 12, and 20. As shown above in Section III, Claims 1, 12, and 20 are patentable. As a result, Claims 3, 4, 14, 15, and 22 are patentable due to their dependence from allowable base claims.

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Accordingly, the Applicant respectfully requests withdrawal of the § 103 rejection and full allowance of Claims 3, 4, 14, 15, and 22.

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PATENTSUMMARY

The Applicant respectfully asserts that all pending claims in this application are in condition for allowance and respectfully requests full allowance of the claims.


If any issues arise, or if the Examiner has any suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at wmunck@munckbutrus.com.

The Commissioner is hereby authorized to charge any fees connected with this communication (including any extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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